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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,282	12/03/2003	Steven H. Voldman	BUR920030119US1	1281
29625	7590	05/26/2005	EXAMINER	
MCGUIRE WOODS LLP 1750 TYSONS BLVD. SUITE 1800 MCLEAN, VA 22102-4215			FENTY, JESSE A	
			ART UNIT	PAPER NUMBER
			2815	

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/707,282

Applicant(s)

VOLDMAN, STEVEN H.

Examiner

Jesse A. Fenty

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-17 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-17 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-7, 9-12, 14-17 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by MacPherson et al. (U.S. Patent No. 6,486,527 B1).

In re claims 1, 14 and 26, McPherson (esp. Fig. 3, 4, 8, 9, 12) discloses a semiconductor fuse, comprising:

an insulating film (51);

at least two conductive regions (55) partially covering the insulating film; and

at least one single-type non-conductive region (67) on the insulating film separating and extending to inner edges of the at least two conductive regions; and

each non-conductive region extending to inner edges of adjacent separate conductive regions;

a first end of each conductive strip is in electrical communication with a first fuse lead (Fig. 4) and a second end of each electrical strip is in electrical communication with a second fuse lead; and

each conductive strip of the multiple conductive strips is in electrical communication with each other (Fig. 3) conductive strip through at least the first fuse lead or the second fuse lead.

In re claims 3-5, McPherson discloses the device of claim 1. The limitations, “wherein a resistance is provided ... regions” and “wherein the resistance increases ... increases” are recitations of the intended use of the claimed device. Terms that simply set forth the intended use, a property inherent in or a function, do not differentiate the claimed composition of these elements from those known to prior art.

In re claim 6, McPherson discloses the device of claim 1, wherein the at least two conductive regions comprise conductive strips and the non-conductive region and the conductive strips are approximately parallel to each other.

In re claim 7, McPherson discloses the device of claim 1, wherein the at least two non-conductive regions comprises a non-conductive material.

In re claims 9 and 10, McPherson (see Fig. 1) discloses the device of claim 1, further comprising a first fuse lead and a second fuse lead disposed on the insulating film in electrical communication with the at least two conductive regions.

In re claim 11, McPherson discloses the device of claim 1, wherein the at least two conductive regions are multiple conductive regions (55) defined as conductive strips disposed on the insulating film with the at least one non-conductive region being multiple non-conductive regions between each of the multiple conductive strips, wherein a first end of each conductive strip is in electrical communication with a first fuse lead and a second end of each electrical strip is in electrical communication with a second fuse lead.

In re claim 12, McPherson (Fig. 3) discloses the device of claim 11, wherein each conductive strip of the multiple conductive strips is in electrical communication with each other conductive strip through at least the first fuse lead or the second fuse lead.

In re claim 15, McPherson discloses the device of claim 14, wherein the conductive film (55) comprises a metal (column 3, lines 62-64).

In re claim 16, McPherson discloses the device of claim 14, wherein the plurality of separate conductive regions alternate positions with the non-conductive regions.

In re claim 17, McPherson discloses the device of claim 1. The limitation, "wherein ... are configured ... fuse" is a recitation of the intended use of the claimed structure and does not further limit that structure.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over McPherson as applied to claim 1 above, and further in view of Manning (U.S. Patent No. 6,249,037 B1).

In re claim 8, McPherson discloses the device of claim 1, but does not expressly disclose the non-conductive material comprising a gas. Manning (esp. Figs. 5, 6) discloses a non-conductive material (32) comprising an air gap and hence, a gas. It would have been obvious for one skilled in the art at the time of the invention to use an air gap as disclosed by Manning for

device of McPherson for the purpose, for example, of providing greater versatility regarding the programming options on the device (Manning; column 4, lines 35-47).

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over McPherson.

In re claim 13, McPherson discloses the device of claim 1, wherein the at least two conductive regions (55) comprise a metal and the insulating film may comprise doped or undoped silicon dioxide, but does not expressly disclose the insulating layer comprising polysilicon. Polysilicon is a well-known insulative layer in the semiconductor art and it would have been obvious for one skilled in the art at the time of the invention to use a polysilicon layer for the insulating layer instead of silicon dioxide, to improve the versatility of the device, since polysilicon has better characteristics as an undoped or doped layer as compared to the silicon dioxide layer used by McPherson.

#### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse A. Fenty whose telephone number is 571-272-1729. The examiner can normally be reached on 5/4-9 1st Fri. Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on 571-272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jesse A. Fenty  
Examiner  
Art Unit 2815

**JEROME JACKSON**  
**PRIMARY EXAMINER**

